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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/065,278	09/30/2002	Jeffrey C. Leung	2284.40534	5691
83532	7590	01/14/2010		
ANGIOTECH P. O. BOX 2840 NORTH BEND, WA 98045			EXAMINER EREZO, DARWIN P	
			ART UNIT 3773	PAPER NUMBER
			NOTIFICATION DATE 01/14/2010	DELIVERY MODE ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary

Application No.

10/065,278

Applicant(s)

LEUNG ET AL.

Examiner

Darwin P. Erez

Art Unit

3773

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 September 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 17-31, 35, 37-78, 85-144, 147 and 150 is/are pending in the application.
- 4a) Of the above claim(s) 21-31, 35-54, 67-78 and 85-140 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 17-20, 55-66, 141-144, 147 and 150 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

1. This Office action is in response to the applicant's communication filed on 9/21/09.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

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5. Claims 17-20, 55-66, 141-144, 147 and 150 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 3,123,077 to Alcamo in view of US 5,123,911 to Granger, and in further view of US 5,931,855 to Buncke.

As to claims 17-20, 141-144, 147 and 150, Alcamo discloses a barbed suture with helically positioned barbs. However, the ratio of the suture diameter to needle diameter is not disclosed. Additionally, the barbs being in a twist cut multiple spiral disposition is not disclosed. However, the examiner notes that the twist cut is really a product-by-process limitation. Once the cuts are made after the suture has been twisted, the suture is unwound. The resulting pattern of the cuts is merely a multiple spiral. Since Alcamo discloses a suture with barbs which are in multiple spirals, this limitation is met. Note that Alcamo discloses a plurality of barbs, as seen in Fig. 3 and 4, wherein one of ordinary skill in the art can select any number of barbs to form multiple spirals, i.e., the spiral shape is merely dependent upon on the selection of the barbs.

As for the specific spirality angle, as these were afforded no particular significance in the specification, were not disclosed as solving any particular problem or being for any particular purpose, the examiner contends that such angles would be obvious design choices, as the applicant's invention would work equally as well with the undisclosed spirality angle of the Alcamo's barbs. Furthermore, it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955).

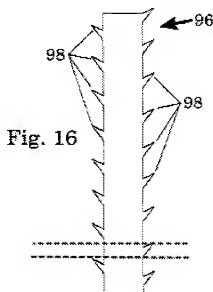
Granger discloses that it was known to attach sutures to suturing needles; wherein the diameter of the needle is equal to the diameter of the suture. This ratio would fall within the claimed ratio. It would have been obvious to have attached the barbed suture of Alcamo to an equal diameter suture needle, in order to facilitate the attachment process and to produce a stronger suture/needle combination which can easily traverse through tissue. As for the range of the ratio being between 3:1 to about 1.47:1, the applicant failed to disclose that the lower limit being 1.47:1 was in any way critical, and did not solve any particular problem or solve any particular purpose relative to ratios between 1.47:1 and 1:1. Granger indicated that normally the needle diameter would be larger than that of the suture and therefore, ratios above 1:1 were disclosed, however, what the exact ratio is was not disclosed. The examiner contends that one would have assumed that a ratio of about 1.47:1 would have produced a similar result to that of around 1:1 and therefore this lower limit on the range would have been considered an obvious design choice.

Buncke discloses a barbed suture in Fig. 16, wherein the barbed suture has successive barb that is offset from the previous barb relative to the longitudinal axis of the body such that any plane perpendicular to the body and cutting transversely through the body and intersecting any portion of a barb will not intersect any portion of any other barb on the body (see figure below). As such, these type of arrangement is just another variant known in the art. Therefore, one of ordinary skill in the art would have found it obvious to modify the device of Alcamo to have the arrangement disclosed by Buncke because a simple substitution of one known barb configuration for another known barb

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configuration will obtain predictable results and would be a mere obvious design choice.

KSR Int'l Co. v. Teleflex Inc., 127 S.Ct. 1727, 1742, 82 USPQ2d 1385, 1396 (2007).



As to claims 55-66, Alcamo is silent with regards to the suture materials. Buncke, discloses the claimed suture materials. It would have been obvious to have made the modified device of Alcamo out of the suture materials disclosed by Buncke, as these materials are well known in the art and allows the suture to be tailored to the procedure... e.g. for certain procedures, it would be desirable for the suture to be non-absorbable and others it would be more desirable for the sutures to be absorbable.

Response to Arguments

6. Applicant's arguments filed 9/21/09 have been fully considered but they are not persuasive.

7. With regards to the Alcamo reference, the applicant argued that the reference fails to teach barbs that are offset and formed as multiple spirals. As to the offset limitation, it is noted that the examiner provided a teaching reference to Buncke to provide the teaching of offset barbs. As to the multiple spirals limitation, Alcamo discloses a plurality of barbs, as seen in Fig. 3 and 4, wherein one of ordinary skill in the art can select any number of barbs to form multiple spirals, i.e., the spiral shape is merely dependent upon on the selection of the barbs.

The examiner also maintains the position that it would be obvious to one of ordinary skill in the art to arrive at any specific spirality angle, as these were afforded no particular significance in the specification, were not disclosed as solving any particular problem or being for any particular purpose. The examiner maintains the contention that such angles would be obvious design choices, as the applicant's invention would work equally as well with the undisclosed spirality angle of the Alcamo's barbs. Furthermore, it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955).

The applicant also argued that Granger discloses the use of a suturing needle connected to non-barbed sutures, and is different from the claimed invention which uses a suturing needle in combination with a barbed suture. However, it is noted that the examiner is merely relying on the Granger reference to teach of a suturing needle having the same width a suture connected thereto. The type of suture is irrelevant since the Granger reference is being used to modify the teachings of Alcamo, which

uses a barbed suture. Furthermore, the connection means of a needle to a non-barbed suture would also work the same way with a needle and a barbed suture.

Conclusion

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Darwin P. Erez whose telephone number is (571)272-4695. The examiner can normally be reached on M-F (8:00-4:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jackie Ho can be reached on (571) 272-4696. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Darwin P. Erezol/
Primary Examiner, Art Unit 3773